

AMENDMENTS TO THE CLAIMS

Please replace the pending claims with the following claim listing:

1. **(Currently Amended)** A fiber laser using as a gain medium an optical fiber that has a core or a cladding doped with a rare-earth element having a laser transition level,
wherein said optical fiber is doped with at least thulium; and said fiber laser employs 1.2 μm band light ~~or a pumping source for exciting the thulium from the lowest energy level $^3\text{H}_6$ to $^3\text{H}_5$ excitation level~~ as a pumping source, and operates at least at 2.3 μm band; and wherein said optical fiber doped with the thulium is a non-silica based fiber that uses glass having a nonradiative relaxation rate which is caused by multi-phonon relaxation and is less than a nonradiative relaxation rate of silica glass as host glass of the optical fiber.
2. **(Cancelled)**
3. **(Currently Amended)** The fiber laser as claimed in claim [[2]] 1, where said non-silica based fiber is one of a fluoride fiber, tellurite glass fiber, bismuth based glass fiber, fluorophosphate glass fiber, chalcogenide glass fiber, and germanate hydroxide glass fiber.
4. **(Previously Presented)** The fiber laser as claimed in claim 1, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.
5. **(Previously Presented)** The fiber laser as claimed in claim 1, operating in both 2.3 μm band and 1.8 μm band wavelength regions.
6. **(Currently Amended)** The fiber laser as claimed in claim 1, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $[[^3\text{H}_5]]$ $^3\text{H}_6$ level.
- 7-9. **(Cancelled)**

10. **(Currently Amended)** A spontaneous emission source using as a gain medium an optical fiber that has a core or a cladding doped with a rare-earth element having a laser transition level,

wherein said optical fiber is doped with at least thulium; and said spontaneous emission source employs 1.2 μm band light ~~or a pumping source for exciting the thulium from the lowest energy level $^3\text{H}_6$ to $^2\text{H}_5$ excitation level~~ as a pumping source, and operates at least at 2.3 μm band; and

wherein said optical fiber doped with the thulium is a non-silica based fiber which uses, as host glass of said optical fiber, glass having a nonradiative relaxation rate which is caused by multi-phonon relaxation and is lower than a nonradiative relaxation rate of silica glass.

11. **(Cancelled)**

12. **(Currently Amended)** The spontaneous emission source as claimed in claim [[11]] 10, wherein said non-silica based fiber is one of a fluoride fiber, tellurite glass fiber, bismuth based glass fiber, fluorophosphate glass fiber, chalcogenide glass fiber, and germanate hydroxide glass fiber.

13. **(Previously Presented)** The spontaneous emission source as claimed in claim 10, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.

14. **(Previously Presented)** The spontaneous emission source as claimed in claim 10, operating in both 2.3 μm band and 1.8 μm band wavelength regions.

15. **(Currently Amended)** The spontaneous emission source as claimed in claim 10, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $[[^3\text{H}_5]]$ $^3\text{H}_6$ level.

16-18. **(Cancelled)**

19. **(Currently Amended)** An optical fiber amplifier using as a gain medium an optical fiber that has a core or a cladding doped with a rare-earth element having a laser transition level,

wherein said optical fiber is doped with at least thulium; and said optical fiber amplifier employs 1.2 μm band light ~~or a pumping source for exciting the thulium from the lowest energy level $^2\text{H}_6$ to $^3\text{H}_5$ excitation level~~ as a pumping source, and operates at least at 2.3 μm band; and

wherein said optical fiber doped with the thulium is a non-silica based fiber that uses glass having a nonradiative relaxation rate which is caused by multi-phonon relaxation and is lower than a nonradiative relaxation rate of silica glass as host glass of the optical fiber.

20. **(Cancelled)**

21. **(Currently Amended)** The optical fiber amplifier as claimed in claim [[20]] 19, where said non-silica based fiber is one of a fluoride fiber, tellurite glass fiber, bismuth based glass fiber, fluorophosphate glass fiber, chalcogenide glass fiber, and germanate hydroxide glass fiber.

22. **(Previously Presented)** The optical fiber amplifier as claimed in claim 19, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.

23. **(Previously Presented)** The optical fiber amplifier as claimed in claim 19, operating in both 2.3 μm band and 1.8 μm band wavelength regions.

24. **(Currently Amended)** The optical fiber amplifier as claimed in claim 19, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $[[^3\text{H}_5]]$ $^3\text{H}_6$ level.

25-27. **(Cancelled)**

28. **(New)** The fiber laser as claimed in claim 3, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.

29. **(New)** The fiber laser as claimed in claim 3, operating in both 2.3 μm band and 1.8 μm band wavelength regions.

30. **(New)** The fiber laser as claimed in claim 3, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $^3\text{H}_6$ level.

31. **(New)** The spontaneous emission source as claimed in claim 12, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.

32. **(New)** The spontaneous emission source as claimed in claim 12, operating in both 2.3 μm band and 1.8 μm band wavelength regions.

33. **(New)** The spontaneous emission source as claimed in claim 12, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $^3\text{H}_6$ level.

34. **(New)** The optical fiber amplifier as claimed in claim 21, using laser transition at least from $^3\text{F}_4$ to $^3\text{H}_5$ level.

35. **(New)** The optical fiber amplifier as claimed in claim 21, operating in both 2.3 μm band and 1.8 μm band wavelength regions.

36. **(New)** The optical fiber amplifier as claimed in claim 21, using laser transition not only from $^3\text{F}_4$ to $^3\text{H}_5$ level, but also from $^3\text{H}_4$ to $^3\text{H}_6$ level.